



**Homeland
Security**

Science and Technology

Highlight

U.S. Department of Homeland Security



System Assessment and Validation for Emergency Responders

The U.S. Department of Homeland Security (DHS) established the System Assessment and Validation for Emergency Responders (SAVER) Program to assist emergency responders making procurement decisions.

Located within the Science and Technology Directorate (S&T) of DHS, the SAVER Program conducts objective assessments and validations on commercial equipment and systems, and provides those results along with other relevant equipment information to the emergency response community in an operationally useful form. SAVER provides information on equipment that falls within the categories listed in the DHS Authorized Equipment List (AEL). The SAVER Program mission includes:

- Conducting impartial, practitioner-relevant, operationally oriented assessments and validations of emergency responder equipment;
- Providing information that enables decision makers and responders to better select, procure, use, and maintain emergency responder equipment.

Information provided by the SAVER Program will be shared nationally with the responder community, providing a life- and cost-saving asset to DHS, as well as to federal, state, and local responders.

The SAVER Program is supported by a network of technical agents who perform assessment and validation activities. Further, SAVER focuses primarily on two main questions for the emergency responder community: "What equipment is available?" and "How does it perform?"

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Standardized Pipe Bomb Test Methodology

The U.S. Army Natick Soldier Center is establishing a Personal Protective Equipment (PPE) NIJ standard for Explosive Ordnance Disposal (EOD). As part of the initial research, Battelle Memorial Institute was contracted to provide a "Report of standardized pipe bomb test methodology to include statistical background information and rationale for test methodology to include materials, charge, initiators, distances, etc." The report also provides a recommended pipe bomb and combustible threat to evaluate the PPE.

Battelle presented a report that describes existing work and recommends testing methods developed specifically for protective equipment to have consistent threats from Improvised Explosive Devices (IEDs). Pipe bombs are extremely effective IEDs and easily constructed from off-the-shelf materials.

For the evaluation standard, the report recommends using a pipe bomb constructed of readily available components, including steel pipe and smokeless gunpowder. According to Battelle, this device provides "the worst case scenario of a legitimate threat."

"The best incendiary threat for EOD PPE is one that provides sustained burning and heat generation," Battelle reports. The report presents the parameter of testing methods and describes other criteria including the recommendation to use several pipe bombs to determine the characteristics that could be reproduced in a laboratory. Several devices using gasoline as its initiator are recommended for the testing standard in order to create a fireball, coat the line of sight areas and burn until self extinguished.

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